



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,296	02/25/2002	Steve M. Matusek	200.402	7109

7590 10/14/2004

The Law Office of Debra J. Fickler
12525 Grandview Drive
Huntley, IL 60142-9501

EXAMINER

MILLER, CARL STUART

ART UNIT PAPER NUMBER

3747

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/084,296	Applicant(s) MATUSEK ET AL.	
	Examiner Carl S. Miller	Art Unit 3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 8 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiraku.

In particular, the applicant's attention is directed to column 6, lines 14 – 25.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kono.

In particular, the applicant's attention is directed to the Abstract, Figure 1 and column 5, lines 35-54.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kono in view of Suffredini.

Kono applies as noted above and Suffredini teaches sensing both the operating voltage reaching the electric pump and sensing a voltage representative of fuel pressure. The reference also senses engine speed (claim 4) and it would have been obvious to sense this as a voltage as well because it was just another engine parameter.

It would have been obvious to modify Kono by sensing the various parameters of control as voltages as taught by Suffredini because Kono is silent on whether his inputs are in the form of voltages or currents and either could have been used to control the Kono pump.

Claims 5-7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kono in view of Yamada.

Kono applies as noted and Yamada teaches using a series of switches to vary input voltage to a high-pressure pump in order to vary pump output.

It would have been obvious to use switches to vary the voltage to the pump of Kono in order to increase the pump output because this was a common way to vary pump speed and thus pump output.

Claim 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kono in view of Wright and Cinquegrani.

Cinquegrani teaches having a use select a particular air/fuel ration (see Abstract) which, in turn, will result in a particular voltage to the fuel pump (See column 3, lines 22-30).

Kono applies as noted and Wright teaches using current outputs from sensors and variable currents to a pump drive to vary pump output.

It would have been obvious to use the variable output pump of Wright as the high pressure pump since both Kono and Wright have as their main objective increasing pump speed and therefore pump fuel output and to have allowed the user to set the pump voltage as taught by Cinquegrani since this was a known option in the injection art.

Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kono, Cinquegrani and Wright as applied to claim 10 above, and further in view of Yamada.

Yamada applies as per claims 5-7 above and it would have been obvious to still use variable voltage to control pump speed even through current inputs are used from

the sensors since the latter could have been converted into appropriate voltage outputs to drive the pump.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kono and Suffredini as applied to claim 2 above, and further in view of Cinquegrani.

Cinquegrani applies s noted with regard to Claims 10-11 above.

Applicant's arguments filed June 7, 2004 have been fully considered but they are not persuasive. In particular, the applicant's new limitations are primarily shown by the art already used against the claims in that fuel pumps and injectors are included in the previously applied references (Hiraku, Kono, etc). Claims 3 and 10 however, now require that the user be allowed to select the voltage to the pump and Cinquegrani does this by allowing the user to set the air/fuel ratio and thus the voltage to the fuel pump.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

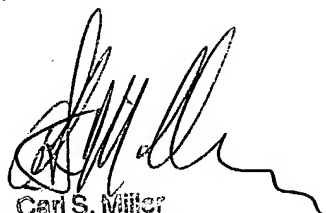
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl Miller whose telephone number is 703-308-2653. The examiner can normally be reached on MTWTHF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Yuen, can be reached at 703-308-1946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Carl S. Miller
Primary Examiner